Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claims 1-9 (canceled)

10. (currently amended) A method of identifying a nucleic acid molecule associated with a phenotypic trait of interest comprising:

(A) screening a mapping population of *Arabidopsis* plants to determine the linkage of said phenotypic trait with a collection of polymorphisms, wherein said polymorphisms are distributed throughout the genome of said mapping population of *Arabidopsis* plants ~~at an average density of more than one polymorphism per about 100kb,~~ wherein at least one of the polymorphisms is selected from Table A;

(B) calculating the linkage of each of said polymorphism to said phenotypic trait; and

(C) isolating said nucleic acid molecule associated with said phenotypic trait based on its linkage to one or more of said polymorphisms.

and wherein said collection of polymorphisms is designed from features of polymorphisms listed in Table A including Single Nucelotide Polymorphism 471736 and recorded on computer readable medium.

Claim 11 (cancelled)

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Claim 12 (currently amended) A ~~the~~ method of isolating a nucleic acid molecule associated with a phenotypic trait of interest ~~according to claim 10,~~ comprising:

(A) screening a mapping population of *Arabidopsis* plants to determine the linkage of said phenotypic trait with a collection of polymorphisms, wherein said polymorphisms are distributed throughout the genome of said mapping population of *Arabidopsis* plants at an average density of more than one polymorphism per about 100kb;

(B) calculating the linkage of each of said polymorphism to said phenotypic trait; and

(C) isolating said nucleic acid molecule associated with said phenotypic trait based on its linkage to one or more of said polymorphisms.

wherein said collection of polymorphisms is capable of detecting Single Nucleotide Polymorphism 471736.

Claims 13-35 (canceled).

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